



## SAW Components

### SAW Rx filter

LTE Diversity  
Band XXI Rx

**Series/type:** **B8807**  
**Ordering code:** **B39152B8807P810**

**Date:** April 26, 2013  
**Version:** 2.0



SAW Components

B8807

SAW Rx Filter

1503.4 MHz

Data Sheet

SMD

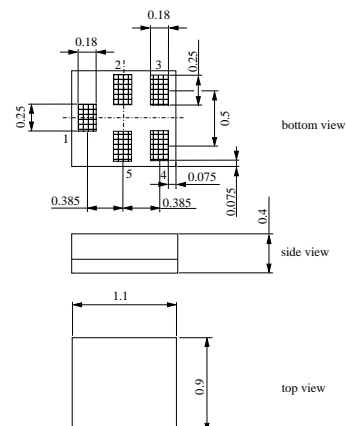
### Application

- Low-loss RF filter for mobile telephone  
LTE Band XXI systems (diversity) receive path (Rx)
- Unbalanced to balanced operation
- Low amplitude ripple
- Usable passband: 15 MHz
- Impedance transformation from 50ohm to 100ohm



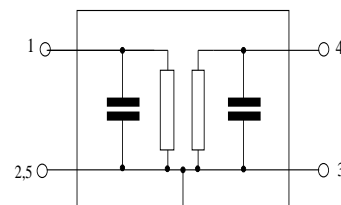
### Features

- Package size 1.1 x 0.9 x 0.4 mm<sup>3</sup>
- RoHS compatible
- Approx. weight 0.001g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostatic Sensitive Device (ESD)
- Moisture Sensitive Level (MSL) 3



### Pin configuration

- 1 Input, unbalanced
- 3,4 Output, balanced
- 2,5 Case-ground



Please read *cautions and warnings and important notes* at the end of this document.



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**Characteristics**

Temperature range for specification: T = -20 °C to +85 °C  
 Terminating source impedance: Z<sub>S</sub> = 50 Ω  
 Terminating load impedance: Z<sub>L</sub> = 100 Ω (Balanced)

		min.	typ. @ 25°C	max.	
<b>Center frequency</b>	f <sub>C</sub>	—	1503.4	—	MHz
<b>Maximum insertion attenuation</b>					
	1495.9 ... 1510.9 MHz		1.7	2.3	dB
<b>Amplitude ripple (p-p)</b>					
	1495.9 ... 1510.9 MHz		0.4	1.5	dB
<b>Input VSWR</b>					
	1495.9 ... 1510.9 MHz		1.5	2.0	
<b>Output VSWR</b>					
	1495.9 ... 1510.9 MHz		1.5	2.0	
<b>Common Mode Rejection Ratio CMRR</b>					
	1495.9 ... 1510.9 MHz	23 <sup>1)</sup>	28		dB
<b>Attenuation</b>					
	10.0 ... 1427.9 MHz	40	59		dB
	1447.9 ... 1462.9 MHz	46	52		dB
	1560.9 ... 1580.9 MHz	34	38		dB
	1580.9 ... 6000.0 MHz	40	45		dB

<sup>1)</sup> A combination of 10° phase balance and 1dB amplitude balance corresponds to 19.6 dB CMRR.



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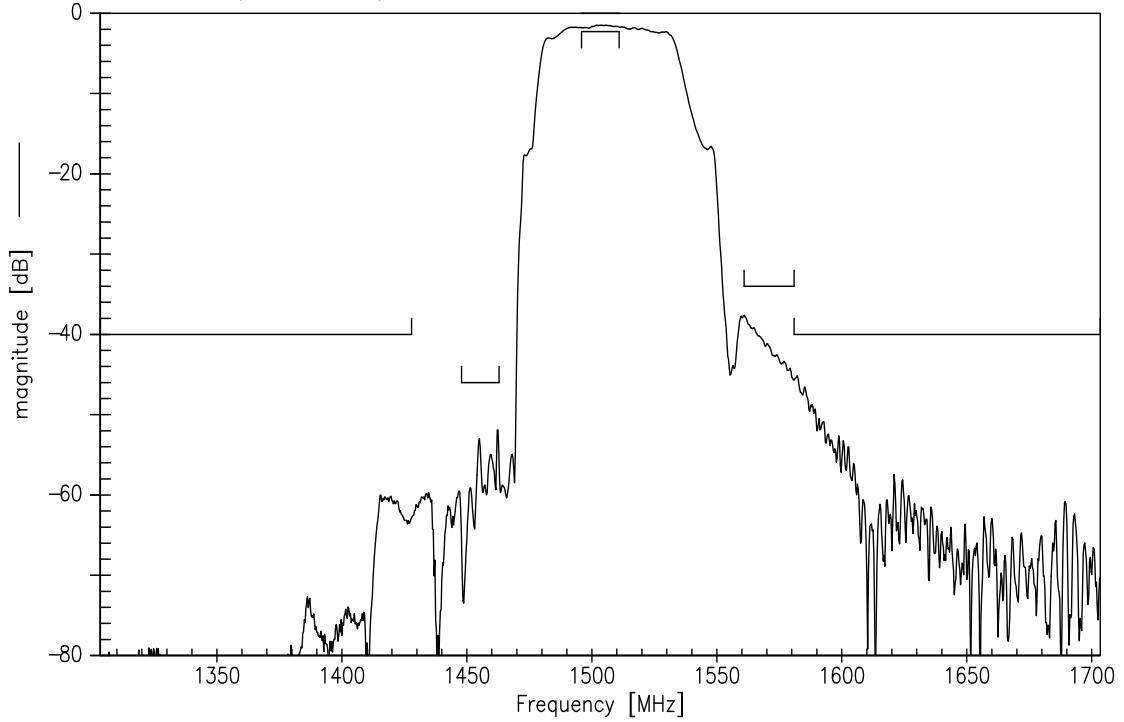
SAW Rx Filter

1503.4 MHz

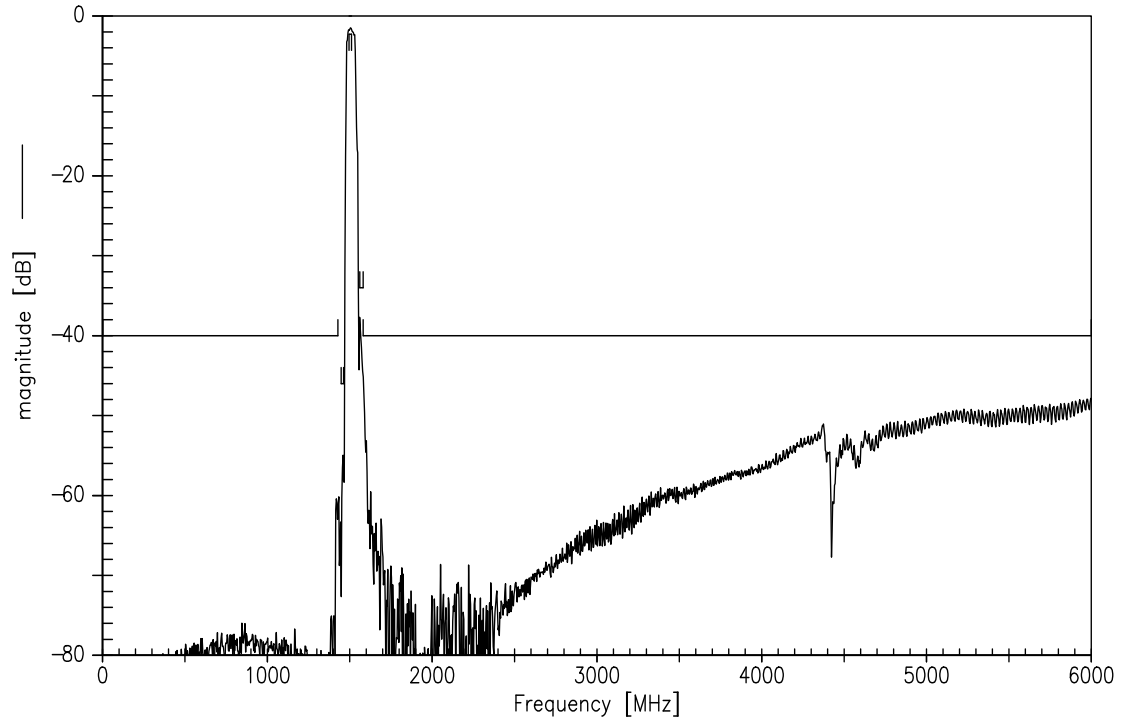
Data Sheet



Transfer function (narrowband)



Transfer function (wideband)



Please read *cautions and warnings* and *important notes* at the end of this document.



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SAW Rx Filter

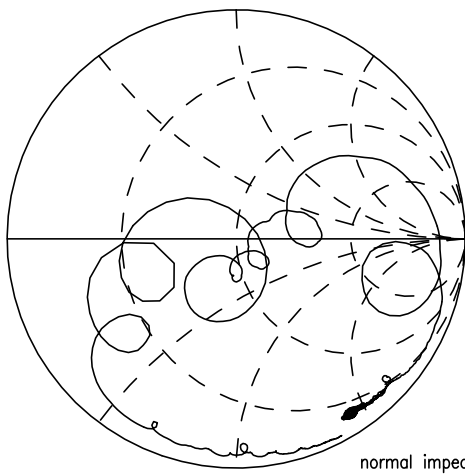
1503.4 MHz

Data Sheet

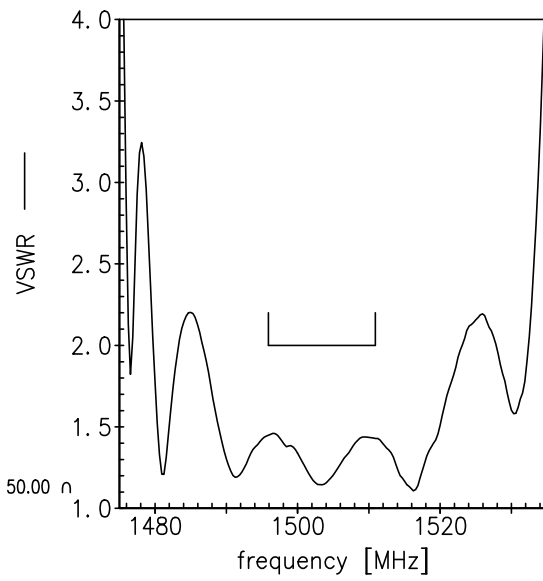


Smith Charts

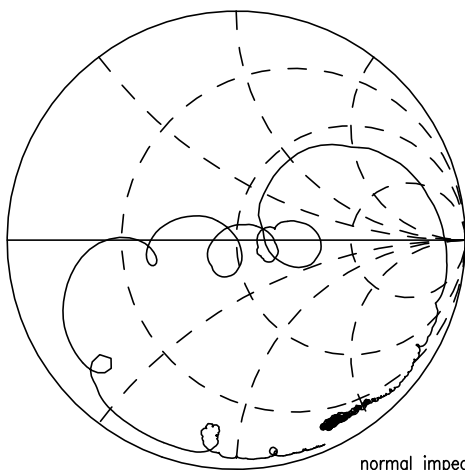
$S_{11}$  function



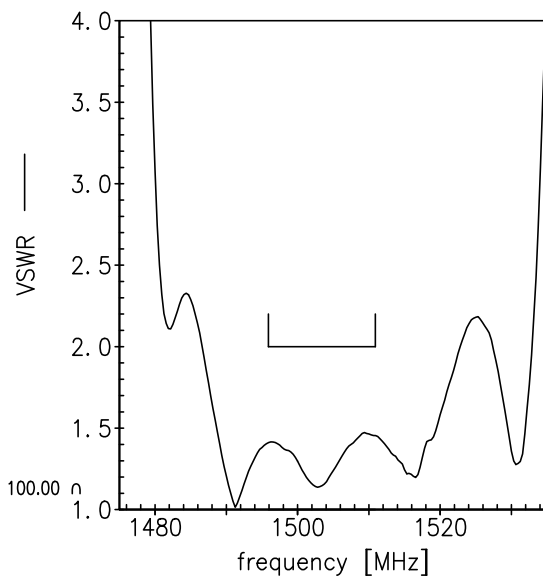
normal impedance: 50.00  $\Omega$



$S_{22}$  function



normal impedance: 100.00  $\Omega$



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Data Sheet



**Maximum ratings**

Storage temperature range	$T_{stg}$	-40/+85	°C	
DC voltage	$V_{DC}$	5	V	
ESD voltage	$V_{ESD}$	50 <sup>1)</sup>	V	machine model, 10 pulse
Input Power at 1447.9 - 1462.9 MHz Tx band	$P_{IN}$	15	dBm	continuous wave T=50 °C, 2000 hours

<sup>1)</sup> acc. to JESD22-A115B (machine model), 10 negative & 10 positive pulses.



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Data Sheet	<b>SMD</b>

## References

<b>Type</b>	B8807
<b>Ordering code</b>	B39152B8807P810
<b>Marking and package</b>	C61157-A8-A30
<b>Packaging</b>	F61074-V8255-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B8807_NB.s3p, B8807_WB.s3p See file header for port/pin assignment table
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8 <sup>th</sup> , 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
<b>Moldability</b>	Before using in overmolding environment, please contact your EPCOS sales office.
<b>Matching coils</b>	See Inductor pdf-catalog <a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a> and Data Library for circuit simulation <a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a>

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